Midwest Clean Diesel Initiative

Cathy Moeger,
Division Director
Technology, Education and Assistance
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Minnesota Pollution Control Agency

MPCA Mission

- ***Working with Minnesotans to protect, conserve and improve our environment and enhance our quality of life.***

What's wrong with this picture?

Point-Source Pollution

- The MPCA has a long history working with and enforcing large single source pollution issues.
- Pollution came from a single smokestack or drainpipe

Back to the ’70s…

- Minnesota’s first air alert was called on February 10 and 11th 1972.
- Downtown Minneapolis was not visible from the University of Minnesota.

Let's NOT go back to the '70s

- The MPCA was young then, but began to use regulatory and compliance tools to improve the air.
- Laws were passed, regulations and rules were put in place – and the smokestack emissions became cleaner.

MPCA Tools

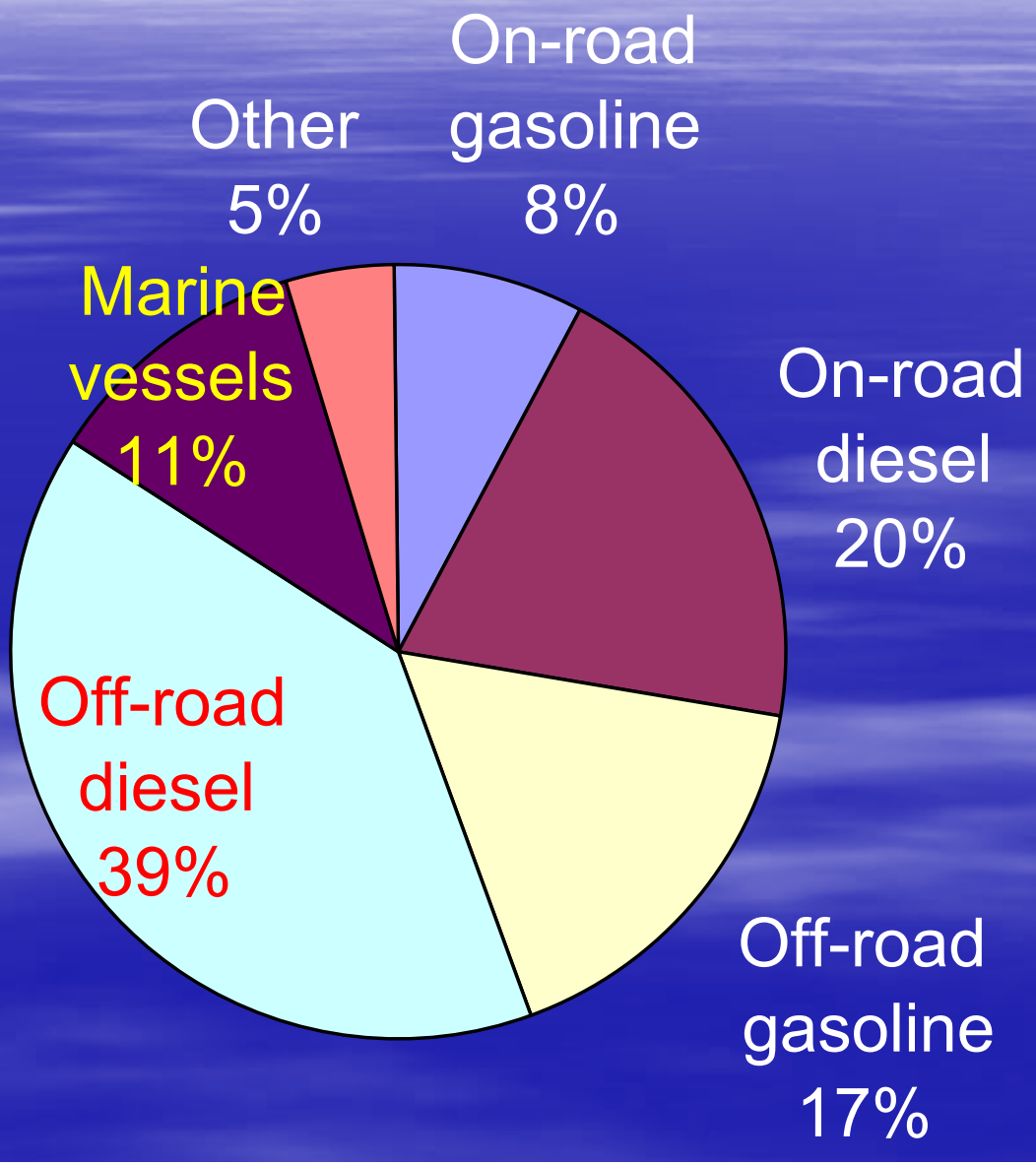
- Back then we had a trusty toolbox full of tools to ensure compliance…
- And they all looked like this…

Mobile Sources:

In the beginning... there was SOOT!

- We are still pioneers, now working to reduce harmful air pollution through volunteer efforts
- MN can achieve cleaner air by reducing diesel emissions

Particle Emissions from Mobile Sources



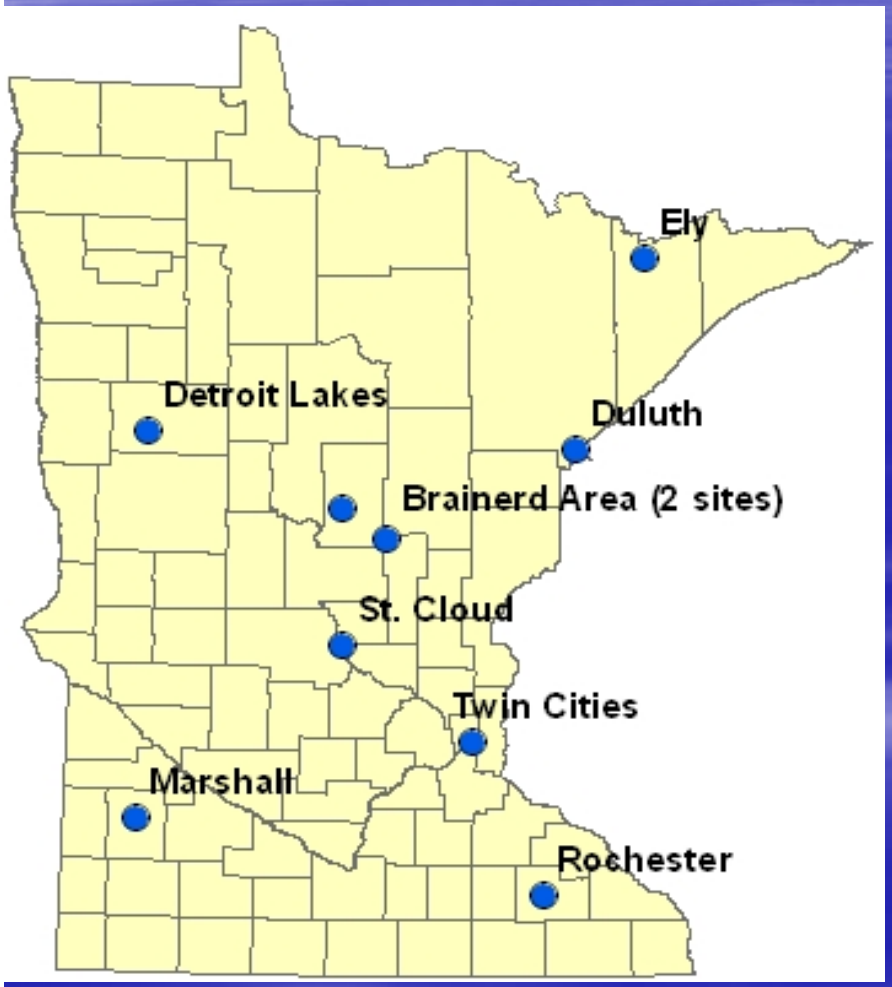
Marine Engines in St Louis County

- Marine engines account for approximately 25% of the oxides of nitrogen (NOx) and 12% of the combustion related fine particles released from all sources in the county
- and St Louis County is a large county
- The Port of Duluth is the largest Great Lakes port in total volume of goods

New Federal Diesel Standards

- Stricter federal engine and fuel standards are coming, but that's not enough
- Existing diesel engines last forever
- We need different tools

The MPCA Today



- Today there are stricter air quality standards
- We monitor eight regions of the state
- We now measure air particulates-- a growing health concern and cause of air alerts

MPCA Today

- If air alerts increase our state may not meet federal air quality standards,
- Huge cost implications for businesses and citizens.
- Diesel engines are one of our bigger concerns because of high levels of “fine particle” and NOx emissions. NOx eventually turns into fine particles as it moves downwind

MPCA Today

- Ships, trains and cranes at ports are major culprits in harmful particle pollution
- The steep topography of Duluth helps trap pollution in the harbor area

Particulate Matters

- Fine particles are so small 40 or more can fit across the diameter of a human hair.
- They are the most dangerous -- they can enter the bloodstream and cause heart and cardiovascular problems

Health Impacts from Diesel

- Increased risk of cardiovascular disease
- Increased respiratory problems
- Probable human carcinogen

Children, elderly and those with occupational exposure most at risk

Diesel Effects Visibility

- Direct fine particle or soot emissions affect local visibility and create unsightly plumes
- NOx and fine particles travel downwind to affect overall visual range or “haziness” in our parks and the BWCA
- Voyageurs Park and the BWCA are unique in that nitrates resulting from NOx emissions cause a substantial portion of visibility impairment

Partnerships *ROCK~!*

- We CAN clean up old diesels and reduce engine idling at ports, transportation centers and schools– IF we work together as partners
- The MPCA is proud to join Project Green Fleet, EPA's Smartway Project and the Midwest Clean Diesel Initiative
- These projects match environmental and health ideals with support from businesses and schools
- A proposed joint priority by MPCA and EPA Region 5

Partners Wanted!

- But we need your help
- Whether you're a marine or truck fleet operator, a school superintendent, a harbor master, or a corporate CEO

- We need your support to promote idling reduction and use of port electricity biodiesel fuel and retrofit technology